DERWENT-ACC-NO:

1995-036513

DERWENT-WEEK:

199611

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TITLE:

Ceramic coatings made by vacuum deposition from vapours

- contg silicon, oxygen, nitrogen and/or carbon, induced by UV radiation from a silent discharge excimer lamp

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PRIORITY-DATA: 1993ES-0001284 (June 10, 1993)

PATENT-FAMILY:

PUB-NO PUB-DATE **LANGUAGE PAGES** MAIN-IPC WO 9429493 A2 December 22, 1994 S 010 C23C 016/48 WO 9429493 A3 --February 9, 1995 N/A 000 C23C 016/48 ES 2067410 A1 March 16, 1995 N/A 000 C23C 014/06 ES 2067410 B1 November 1, 1995 N/A 000 C23C 014/06

DESIGNATED-STATES: CA JP US AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

CITED-DOCUMENTS: 5.Jnl.Ref; EP 402798; EP 421834; JP 62074084; US 4631199

APPLICATION-DATA:

PUB-NO APPL-DESCRIPTOR APPL-NO APPL-DATE WO 9429493A2 N/A 1994WO-ES00058 June 9, 1994 WO 9429493A3 N/A 1994WO-ES00058 June 9, 1994 ES 2067410A1 N/A 1993ES-0001284 June 10, 1993 ES 2067410B1 N/A 1993ES-0001284 June 10, 1993

INT-CL (IPC): C23C014/06, C23C014/16, C23C014/28, C23C016/30, C23C016/48

ABSTRACTED-PUB-NO: WO 9429493A

BASIC-ABSTRACT:

Coatings of formula SiaObNcCd, in which a,b,c,d can have any value including zero, are made by (a) cleaning the substrate at component with organic solvent; (b) placing in a reactor with controls for vacuum, temp, gas flow and pressure; (c) introducing gas mixts., namely SiH4, Si2H6 or other silicon gas, N2O, O2,

CO2 or other gas to provide oxygen, NH3 or other gas to provide nitrogen, and/or CH4, C2H2, C2H4 or other gas to provide carbon; and (d) heating while the gas mixt. under high vacuum is irradiated by a silent discharge excimer lamp through a window in the reactor. The conditions may be varied during the process to produce a graduated coating.

USE - In micro- or opto-electronics, solar cells and protective coatings.

ADVANTAGE - Coatings can be deposited at low temp. down to 100 deg. C. Extensive areas and irregular shapes can be coated. Wide variations are possible in substrate, coating compsn. number of layers, etc.

CHOSEN-DRAWING: Dwg.0/1

TITLE-TERMS: CERAMIC COATING MADE VACUUM DEPOSIT VAPOUR CONTAIN SILICON OXYGEN

NITROGEN CARBON INDUCE ULTRAVIOLET RADIATE SILENT DISCHARGE

EXCIMER LAMP

DERWENT-CLASS: L02 L03 M13 U11 U12 X15

CPI-CODES: L01-G04; L02-A02B; L03-J; M13-E02;

EPI-CODES: U11-C05B2; U12-A02A4B; X15-A02A;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0323U; 0326U; 0327U; 1066U; 1713U;

1779U

; 1831U ; 1881U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1995-016447 Non-CPI Secondary Accession Numbers: N1995-028702

ORGANIZACION MUNDIAL DE LA PROPIEDAD INTELECTUAL Oficina Internacional **PCT**

SOLICITUD INTERNACIONAL PUBLICADA EN VIRTUD DEL TRATADO DE COOPERACION EN MATERIA DE PATENTES (PCT)

(51) Clasificación Internacional de Patentes 5 :	A2	(11) Número de publicación internacional:	WO 94/29493
C23C 16/48, 16/30		(43) Fecha de publicación internacional: 22 de Dicie	unbre de 1994 (22.12.94)

(21) Solicitud internacional:

PCT/ES94/00058

(22) Fecha de la presentación internacional:

9 de Junio de 1994 (09.06.94)

(30) Datos relativos a la prioridad: P 9301284

10 de Junio de 1993 (10.06.93) ES

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(81) Estados designados: CA, JP, US, Patente curopea (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Publicada

Sin informe de búsqueda internacional, será publicada nuevamente cuando se reciba dicho informe.

- (54) Title: CERAMIC COATINGS PRODUCED BY THE USE OF A SILENT DISCHARGE EXCIMER LAMP
- (54) Títulos RECUBRIMIENTOS CERAMICOS PRODUCIDOS MEDIANTE LAMPARA EXCIMERA DE DESCARGA SILENCIOSA

(57) Abstract

Ccramic coatings within the system Si-O-N-C, may be applied to various materials and components by means of a method based on the lamp-induced chemical vapor deposition (Lamp-CVD). The flexibility of this method makes possible the control of the physic-chemical properties of the coatings which apply specially to the fields of microelectronics, optoelectronics, solar cells and protection of materials.

(57) Resumes

Recubrimientos cerámicos dentro del sistema Si-O-N-C, pueden ser aplicados sobre diferentes materiales y componentes por medio de un método basado en la Deposición Química a partir de Vapor inducida por Lámpara (Lamp-CVD). La flexibilidad de este método permite controlar las propiedades físico-químicas de los recubrimientos, siendo de especial aplicación en los campos de la microelectrónica, optoelectrónica, células solares y protección de materiales.

12/04/2003, EAST Version: 1.4.1